

## Claims

1. A protective cap for sealing off the end face of a  
5 collecting vessel (1) of a condenser closed by means  
of a sealing stopper (4), the collecting vessel (1)  
having a tube wall (2) basically projecting above the  
sealing stopper (4), characterized in that the  
10 protective cap (9, 20, 30) is made from a plastic  
material and is arranged in such a way that it seals  
off the collecting vessel in the area of the end of  
the tube wall projecting above the protective cap.
2. The protective cap as claimed in claim 1,  
15 characterized in that the protective cap has a  
basically plane annular face, which rests on the end  
annular face of the tube wall and seals off the  
collecting vessel.
- 20 3. The protective cap as claimed in claim 1,  
characterized in that the protective cap has an  
annular face, which rests on the peripheral inner  
circumferential surface of the tube wall and seals off  
the collecting vessel.
- 25 4. The protective cap as claimed in any one of the  
preceding claims, characterized in that the protective  
cap has a gripping means, which interacts with a  
gripping means of the sealing stopper or the tube wall  
30 and is connected thereto.
5. The protective cap as claimed in any one of the  
preceding claims, characterized in that the protective  
cap has a plug, which engages in a seat of the sealing  
35 stopper or of the tube wall.

6. The protective cap as claimed in any one of the preceding claims, characterized in that the protective cap has a seat, in which a plug of the sealing stopper or of the tube wall engages.
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7. The protective cap as claimed in claim 5 or 6, characterized in that the plug has a thread, such as an external thread, which engages in an internal thread of the seat.
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8. The protective cap as claimed in any one preceding claim, characterized in that the plastic is a polyamide (PA), which may be reinforced by a fiber admixture.
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9. The protective cap as claimed in any one preceding claim, characterized by a peripheral sealing flange (10, 21) having a plane sealing face (22) for bearing on the end face (3) of the tube wall (2).
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10. The protective cap as claimed in any one preceding claim, characterized by a peripheral sealing flange (10, 21) having a cylindrical sealing face (22) for bearing on the inner circumferential surface of the tube wall (2).
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11. The protective cap as claimed in any one of the preceding claims, characterized in that the sealing face and the protective cap are of two-part design.
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12. The protective cap as claimed in claim 11, characterized in that the sealing face is connected as an annular element to the protective cap.
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13. The protective cap as claimed in claim 11, characterized in that the sealing face is formed in

one piece as an annular element together with the protective cap.

14. The protective cap as claimed in any one preceding  
5 claim, characterized in that the sealing face is made from an elastic material, such as an elastomer.
15. The protective cap as claimed in any one preceding  
10 claim, characterized in that the sealing face is braced by way of the plug against the end face (3) of the tube wall (2) or the inner circumferential surface of the tube wall.
16. The protective cap as claimed in any one preceding  
15 claim, characterized in that a circular, conical concave surface (25) is arranged between the threaded plug (24) and the sealing face (22).
17. The protective cap as claimed in any one of the  
20 preceding claims, characterized by a centrally arranged, profiled knob (23, 33).
18. The protective cap as claimed in claim 17,  
25 characterized in that the knob (23, 33) is of hollow design construction and has an outwardly open blind hole (26, 33b) having an approximately star-shaped cross-section.
19. The protective cap as claimed in any one of claims 1  
30 to 18, characterized in that the sealing flange (35) has a peripheral, raised edge (31).
20. The protective cap as claimed, in particular, in claim  
35 19, characterized in that the edge (31) has an undulating upper edge (32).

21. The protective cap as claimed in any one of the preceding claims, characterized in that a rubber sealing plate (36), connected to the protective cap (30), is arranged on the sealing flange (35).
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22. The protective cap as claimed in claim 21, characterized in that the sealing plate (36) is buttoned or molded by means of protrusions (37) into holes (38) in the flange (35).
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23. The protective cap as claimed in any one of the preceding claims, characterized in that a peripheral sealing lip is molded onto the sealing flange.
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24. A condenser having a collecting vessel with a protective cap according to any one of the preceding claims.